## EXHIBIT C



I'VE ALWAYS WONDERED...

## Why do they still have floor traders at the NYSE?

By Golda Arthur July 04, 2014 | 11:15 AM



Traders work on the floor of the New York Stock Exchange (NYSE) on June 20, 2014 in New York City. - Spencer Platt/Getty Images

Listener John Wang, who dabbles in a little online trading, wrote in to ask this:

"I've always wondered why there are still people on the floor of the New York Stock Exchange. It always seems kind of strange that they're there, now that we have computers and networks for doing all sorts of trades."

Most of us have a mental picture of floor traders at the stock market – men in blue jackets, shouting at each other, waving bits of paper, gesturing wildly with hand signals.

"Even though it looks chaotic to people, it's actually very crystal clear what was going on to the people down on the floor," says Johanna Lee, director of a documentary film called The Pit, about a group of floor brokers at the New York Board of Trade.

The guys in her movie dealt in coffee futures. And they used to do something called open outcry, setting the price right then and there

Why Do They Still Have Floor Traders At The NYSE?

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I went to find out at the New York Stock Exchange: the grand stage of American capital markets. It has an impressive carved stone ceiling, in which you can see the nearly 200 years of history – which is totally at odds with the rows of computer screens that line every single booth in the hall.

On the floor, traders in their blue jackets are everywhere.

"I spent my whole career in this building," says Kenny Polcari, a trader for O'Neill Securities who represents an institutional investor. "For me it's really all I know."

Polcari, a fast-talker with a big laugh and sense of humor, says things work very differently today from when he first started out in this job 30 years ago.

"Today it's defined by technology. It's defined by high-speed computers that take the emotion out of investing. Some say it's good. I, on the other hand... Listen, part of what investing was about was the emotion. You come down here 25 or 30 years ago, the emotion blew the roof off the building every single day. It was just so exciting."

But here's the thing - for all the excitement and history and prestige, the NYSE actually handles a *tiny* amount of the overall volume of trades in the U.S.

So who does the rest of the trading? Robots.

"Robots now do anywhere between 50 and 75 percent of the trades in the United States," says Bob Ivry, who works for Bloomberg News and wrote a book called The Seven Sins of Wall Street.

Ivry says the real action takes place in a high-security warehouse in a small town in New Jersey. That's where you'll find computers trading at lightning speed. They're also cheaper and more efficient than humans.

Hooray for robots, right? Not quite.

"They are there when the going is good," says Ivry. "The minute the prices start plummeting, for any reason, what the robots do is they run for the hills. They're nowhere to be seen when that stock is going down."

Computers have been known to cause a flash crash – where prices tumble uncontrollably, causing a lot of damage. But the reality is, automated trading has taken over.

So does that make traders like Kenny Polcari an endangered species?

Polcari believes there is still a role for human judgement in the system, especially when the market is fragmented. "You almost have to develop a sixth sense, you have to be able to feel the liquidity," he says. "Today brokers use that sixth sense to try and assess supply and demand in a fractured market structure. And I think that's part of the challenge but that's also part of the key, that's how you're able to represent customers."

"As far as the nuts and bolts of trading are concerned, they're already gone," says Ivry. "If you consider there's some theatre involved – and I do – then they have a specific and necessary function. They put a face to the battle of the robots. All those traders down there in their blue smocks and their pins – they put a face on trading, on American capitalism."

Ivry says we need a narrative to tell us how to invest our money in a way that will help communities. Trading algorithms are "a brutal and souless way of allocating capital," he says.

Back at the New York Stock Exchange, it's a good thing trader Kenny Polcari is a "Type A" personality.

"I think that's fair," Polcari says with a hearty laugh. "I love being the face of Wall Street."

#### Why Do They Still Have Floor Traders At The NYSE?

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# The Real Wall Street Is Actually in Secaucus, New Jersey

There are many electronic exchanges and electronic crossing networks, so business is now more likely done via a data center such as NY4 in Secaucus, N.J., instead of the NYSE.

#### By Michael Khouw

Jul 9, 2015 10:14 AM EDT

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NEW YORK (TheStreet) -- Viewers who tune in to the financial news during regular market hours will likely see the floor of the New York Stock Exchange: colorful lights, colorful jackets and a lot of people bustling about in front of a multitude of screens looking very busy trading.

But are they? When the NYSE halted trading, did trading actually halt at all?

To understand the implications of halts, closures and "glitches," it is important to understand a bit about how markets actually function.

Once upon a time, in simple terms, those who wanted to buy or sell a stock, would call their brokers on the phone. Brokers would jot orders down on pieces of paper and stamp the time of the calls on order tickets.

They would then direct the orders to their traders, who would contact their floor brokers, who were actually on the exchange (the guys in the colorful jackets with badges).

The floor brokers would go to the "post" where the stocks traded and execute the orders with the specialists or traders in the pit. They would then report the "fill" back up the chain eventually back to the buyer and seller.

It was quite a manual process. Naturally, if there were no traders or brokers on the exchange floor, then trading didn't take place because that is where buyers and sellers came together to transact since the earliest days of the buttonwood tree.

That isn't exactly how things work today, though. Ultimately, an exchange is simply a mechanism for buyers and seller to pair off, and that doesn't occur with pieces of paper and brokers and traders screaming at each other in the pits.

Now there are a huge number of exchanges and electronic crossing networks where buyers and sellers pair off electronically.

All these venues compete for business as the place to transact, but that "place" is really not on the New York Stock Exchange floor on Wall and Broad but more likely a data center such as NY4 in Secaucus, N.J., where rows upon rows of servers belonging to a multitude of different financial institutions, including many exchanges, exist in the same building. In fact, it is very likely that the broker also has servers in the same facility.

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Michael Khouw has no positions in any of the securities mentioned. Action Alerts PLUS will neither buy nor sell options.

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# This is the last photo we'll ever run of the NYSE trading floor



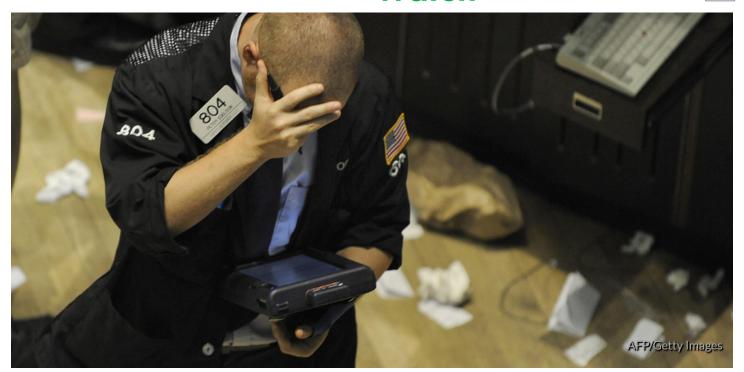
By **Jeremy Olshan** 

Published: Oct 1, 2014 1:20 p.m. ET









No more Mr. NYSE guy.

The stock market ditched Wall Street years ago. The masters of the universe, like the Giants and Jets, now scrimmage across the Hudson River in New Jersey—their trading these days done almost entirely by computers **piping algorithmic playbooks into a fortress of servers in Mahwah** and other competing exchanges nearby.

The small squads of human traders who remain on the floor at 11 Wall St., the New York Stock Exchange's Teddy Roosevelt-era headquarters, are (for the most part) just playing fantasy football.

Yet just as the Big Apple's football teams kept their New York names after wedding themselves to the Garden State, the financial industry, investors and the media continue to pretend that the Big Board is where the action is. We need to end this fiction.

How much actual trading is done at 11 Wall St.?

"It's pretty darn close to zero," said Eric Scott Hunsader, founder of market-data provider Nanex. "Even that is pushing it, because they don't make markets, the guys in the jackets. They might say they do, but they don't."



Q

Pools.")

So this will be the last time you will see photos of the NYSE floor—or any of the world's trading floors—on MarketWatch (unless something actually newsworthy happens there). The Big Board is now little more than a Big Tent for a phony media circus of photo-ops and cable-news talking heads. P.T. Barnum couldn't draw the crowds Jack Ma did last month when he clanged the bell to kick off Alibaba's IPO. The only things exchanged on the floor, however, were camera flashes, sound bites, and high-fives.

Don't get me wrong. I love the photos of the guys on the trading floor. They are human emoji, a shorthand able to illustrate the full range of stock-market sentiment from triumph to agony. (Peter Tuchman, a 30-year veteran of the floor, was **recently dubbed the "most photographed trader on Wall Street" by BuzzFeed**.)

And, to be fair, these "designated market makers," as the several dozen remaining floor specialists are now called, aren't there entirely for show. "There is a value to having humans in place at the point of sale—seeing them there provides a sense of security and accountability that a wholly electronic exchange cannot offer," said Eric Ryan, a spokesman for the NYSE. "When things are going fine—90% of the time you don't need a person, but when there are imbalances, instability, or when a fat-fingered trader orders a million shares instead of 10,000, our guys can catch it before it hits the marketplace."

Still, by relying on trading-floor photos, we have been distorting the truth rather than reporting it. We are doing a disservice to you, our readers, and therefore we too must change with the times and find new ways to illustrate the ups and downs of the market.

"The photos of traders, especially in times of jubilation or distress, have been the human face of Wall Street over the years despite technological changes," said Wall Street historian Charles Geisst. But the practice only began after World War II. "In earlier years, editorial cartoons were used instead, and they were usually less than flattering," Geisst said.



Q

Photos of downtown Mahwah?

We need your help. Give us your suggestions in the comments or tweet them with the hashtag #NoSadTraders.

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# Inside The Most Important Building For U.S. Capital Markets, Where Trillions Trade Each Day



by Tyler Durden Wed, 04/13/2016 - 20:03

Ask people which is the most important structure that keeps the US capital markets humming day after day, and most will likely erroneously say the New York Stock Exchange, which however over the past decade has transformed from its historic role into nothing more than a TV studio for financial cable networks. Some might be closer to the truth and say that the most important building is the true New York Stock Exchange located in Mahwah, New Jersey however that also is not true as the NYSE now accounts for just a small fraction of total traded volume.

No, the real answer of what the most important building if for US capital markets, and not just stocks, but all assets classes, as under its roof on a daily basis electronic trades representing many trillions of dollars' worth of equities derivatives, currencies, and fixed-income take place, is the Equinix NY4 data center, located at 755 Secaucus Road, in Secaucus, NJ 07094.

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The **NYSE** and Nasdaq: How They



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BY INVESTOPEDIA **STAFF** 

Work

Updated Dec 6, 2018

Whenever someone talks about the stock et as a place

Think you're ready to go public?

where equities are exchanged between buyers and sellers, the first thing that comes to mind is either the New York Stock Exchange (NYSE) or Nasdaq, and there's no debate over why. These two exchanges account for the trading of a major portion of equities in North America and worldwide. At the same time, however, the NYSE and Nasdaq are very different in the way they operate and in the types of equities traded therein. Knowing these differences will help you better understand the function of a stock exchange and the

mechanics behind the buying and selling of stocks.

## Location, Location, Location

The location of an exchange refers not so much to its street address but the "place" where its transactions take place. While the NYSE still retains its physical trading floor on Wall Street in New York City, the vast majority of exchanges occur in Mawah, New Jersey, at the NYSE's data center.

The Nasdaq, on the other hand, does not have a physical trading floor at all. At both telecommunications



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centers, trading takes place directly between investors and their buyers or sellers, who are the market makers (whose role we discuss below in the next section), through an elaborate system of companies electronically connected to one another.

Dealer Vs. Auction Market

The fundamental

<u>difference</u>

between the

NYSE and Nasdaq

is in the way

securities on the

exchanges are

transacted

between buyers

and sellers. The

Nasdaq is a

dealer's market,

wherein market

participants are

not buying from and selling to one another directly but through a dealer, who, in the case of the Nasdaq, is a market maker. The NYSE differs in that, at market open and close, it functions as an auction market, wherein individuals are typically buying and selling between one another, and there is an auction occurring; that is, the highest bidding price will be matched with the lowest asking price.



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### Traffic Control

Each stock market has its own traffic control police officer. Yep, that's right: just as a broken traffic light needs a person to control the flow of cars, each exchange requires people who are at the "intersection" where buyers and sellers "meet," or place their orders. The traffic controllers of both exchanges deal with specific traffic problems and, in turn, make it possible for their markets to work. On the Nasdaq, the traffic controller is known as the market maker, who, we already mentioned, transacts with

buyers and sellers to keep the flow of trading going. On the NYSE, the exchange traffic controller is known as the specialist, who is in charge of matching up buyers and sellers.

The definitions of the role of the market maker and that of the specialist are technically different; a market maker creates a market for a security, whereas a specialist merely facilitates it. However, the duty of both the market maker and specialist is to ensure smooth and orderly markets for clients. If too

many orders get backed up, the traffic controllers of the exchanges will work to match the bidders with the askers to ensure the completion of as many orders as possible. If there is nobody willing to buy or sell, the market makers of the Nasdaq and the specialists of the NYSE will try to see if they can find buyers and sellers and even buy and sell from their own inventories.

Perception and Cost of NYSE and Nasdaq One thing that we can't quantify but must acknowledge is the way that investors

generally perceive the companies on each of these exchanges. The Nasdaq is typically known as a high-tech market, attracting many of the firms dealing with the internet or electronics. Accordingly, the stocks on this exchange are considered to be more volatile and growth-oriented. On the other hand, the companies on NYSE are perceived to be less volatile. Its listings include many of the bluechip firms and industrials that were around before our parents, and its stocks are considered to be

more stable and established.

Whether a stock trades on the Nasdaq or the NYSE is not necessarily a critical factor for investors when they are deciding on stocks to invest in. However, because both exchanges are perceived differently, the decision to list on a particular exchange is an important one for many companies. A company's decision to <u>list on</u> <u>a particular</u> exchange is also affected by the listing costs and requirements set by each exchange. The entry fee a company can expect to pay on

the NYSE is up to \$500,000 while on the Nasdaq, it is only \$50,000 to \$75,000. Yearly listing fees are also a big factor: on the NYSE, they based on the number of shares of a listed security, and are capped at \$500,000, while the Nasdaq fees come in at around \$27,500. So we can understand why the growth-type stocks (companies with less initial capital) would be found on the Nasdaq exchange.

## Public Vs. Private

Before March 8, 2006, the final major difference between these two exchanges was their type of ownership: the Nasdaq exchange was listed as a publicly-traded corporation, while the NYSE was private. This all changed in March 2006 when the NYSE went public after being a not-for-profit exchange for nearly 214 years. Most of the time, we think of the Nasdaq and NYSE as markets or exchanges, but these entities are both actual businesses providing a service to earn a profit for shareholders.

The shares of these exchanges, like those of any public company, can be bought and sold by investors on an exchange.

(Incidentally,

both the Nasdaq

and the NYSE

trade on

themselves.) As

publicly traded

companies, the

Nasdaq and the

NYSE must follow

the standard

filing

requirements set

out by the

Securities and

**Exchange** 

Commission.

Now that the

NYSE has become

a publicly traded

corporation, the

differences

between these

two exchanges

are starting to

decrease, but the

remaining

differences

should not affect

how they

function as

marketplaces for

equity traders

and investors.

## The Bottom Line

Both the NYSE and the Nasdaq markets accommodate the major portion of all equities trading in North America, but these exchanges are by no means the same. Although their differences may not affect your stock picks, your understanding of how these exchanges work will give you some insight into how trades are executed and how a market works.

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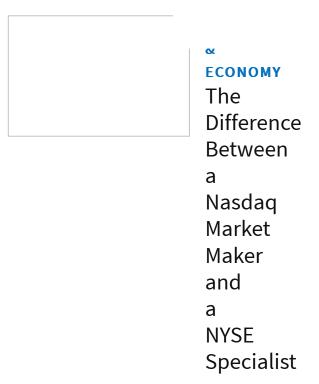
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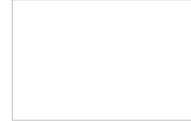
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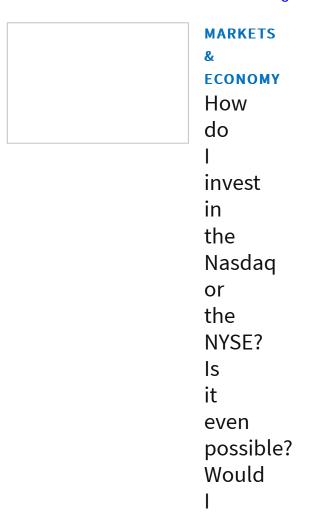
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